

CITY COUNCIL MEETING
MAY 25, 1988

DRAFT ENVIRONMENTAL
IMPACT REPORT (DEIR)
OF THE PROPOSED 230 KV
ELECTRIC INTERCONNECTION
BETWEEN THE CITY OF
LODI AND THE WESTERN
AREA POWER
ADMINISTRATION

CC-51(e)

A court reporter attended this meeting and prepared a verbatim transcript of the proceedings. The transcript is on file in the City Clerk's office and is a referenced Exhibit and part of the original minutes for this meeting.

No formal action was taken by the City Council at this meeting.

CITY COUNCIL

JAMES W. PINKERTON, Jr., Mayor
JOHN R. (Randy) SNIDER
Mayor Pro Tempore
DAVID A. HINCHMAN
EVELYN M. OLSON
FRED M. REID

CITY OF LODI

CITY HALL, 221 WEST PINE STREET
CALL BOX 3006
LODI, CALIFORNIA 95241-1910
(209) 334-5634
TELECOPIER (209) 333-6795

THOMAS A. PETERSON
City Manager
ALICE M. REIMCHE
City Clerk
BOB McNATT
City Attorney

May 9, 1988

Helen McPherson
Court Reporter
1351 West Oak Street
Stockton, CA

Dear Ms. McPherson:

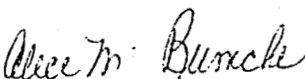
This letter will confirm our telephone conversation with your office whereby we have requested the services of a court reporter for the following dates:

- a) Public Hearing - Wednesday, May 25, 1988, 7:30 p.m., Fine Arts Building, Hutchins Street Square, corner of Hutchins Street and Oak Street, Lodi.
- b) Public Hearing - Wednesday, June 1, 1988: 7:30 p.m., City Council Chambers, 221 West Pine Street, Lodi.

The subject of both of these public hearings is the Draft Environmental Impact Report for the City of Lodi Direct Interconnection Project. We have enclosed a copy of the subject document so that you can familiarize yourself with the topic prior to the hearings.

Should you have any questions, please do not hesitate to call this office.

Very truly yours,


Alice M. Reimche
city Clerk

AMR: jj

NOTICE OF SPECIAL MEETING AND PUBLIC HEARING
BY THE CITY COUNCIL OF THE CITY OF LODI
REGARDING THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)
OF THE PROPOSED 230 KV ELECTRICAL INTERCONNECTION
BETWEEN THE CITY OF LODI AND
THE WESTERN AREA POWER ADMINISTRATION

A Special meeting and Public Hearing will be conducted by the City Council of the City of Lodi to receive public review and comment regarding the Draft Environmental Impact Report (DEIR) of the proposed 230 KV Electrical Interconnection between the City of Lodi and the Western Area Power Administration at 7:30 p.m., Wednesday, May 25, 1988, in the Fine Arts Building, Hutchins Street Square, southwest corner of South Hutchins Street and West Oak Street, Lodi, California.

Information regarding this matter may be obtained in the office of the City Clerk 221 West Pine Street, Lodi, or by telephoning (209) 333-6702.

Dated: May 10, 1988


Alice M. Reimche
City Clerk

LEGAL NOTICE

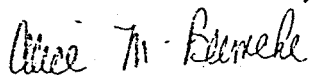
NOTICE OF SPECIAL MEETING AND PUBLIC HEARING
BY THE CITY COUNCIL OF THE CITY OF LODI
REGARDING THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)
OF THE PROPOSED 230 KV ELECTRIC INTERCONNECTION
BETWEEN THE CITY OF LODI AND THE WESTERN AREA POWER ADMINISTRATION

NOTICE IS HEREBY GIVEN that on Wednesday, the 25th day of May, 1988, at the hour of 7:30 p.m. or as soon thereafter as the matter may be heard, the Lodi City Council at a special meeting will conduct a public hearing in the Fine Arts Building, Hutchins Street Square, southwest corner of South Hutchins Street and West Oak Street, Lodi, to receive public review and comment regarding the Draft Environmental Impact Report (DEIR) of the proposed interconnect between the City of Lodi and the Western Area Power Administration.

Information regarding this item may be obtained in the office of the City Clerk at 221 West Pine Street, Lodi, California, or by phoning (209) 333-6702. All interested persons are invited to present their views either for or against the above proposal. Written statements may be filed with the Community Development Director at any time prior to the hearing scheduled herein and oral statements may be made at said hearing.

If you challenge the Draft Environmental Impact Report in court you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice or in written correspondence delivered to the City Clerk at, or prior to, the public hearing.

By Order of the Lodi City Council



Alice M. Reimche
City Clerk

Dated: May 10, 1988

Approved as to form:



Bobby W. McNatt
City Attorney

THURSDAY

MAY 18 1988

May 17, 1988

City Council
City of Lodi
City Hall
221 W. Pine Street
Lodi, Calif. 95241-1910

Dear Council Members:

In regard to the Direct Interconnection Project, I am writing in concern as I own property located on the corner of Hwy. 12 and Ray Road. It is my understanding that you want to put power lines along Hwy. 12, which would place a pole directly on my property. No one has contacted me about this situation.

There are several reasons you should be aware of as to why I do not want any power poles on my property. This would cause vines to be removed unnecessarily from my property. These poles and power lines would devalue my property and all other property in the area where the poles and lines would be located. You would be ruining valuable frontage with the ugly sight of these poles. I prefer you go in a middle section along the Woodbridge Canal in a straight line and not ruin the frontage.

As there are alternate routes one can take, these other ideas may be more beneficial to all those concerned. P.G.E. has offered to upgrade their systems. The most logical route is to go underground with your project.

It seems to me that the Northern California Power Co. is misleading you to believe that this project would be in your best interest, when you still will be obligated to pay rent on P.G.E. facilities.

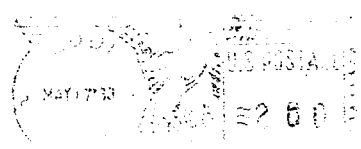
Sincerely,

Frank Alberti

Frank Alberti

FA/1a

Frank Alberti
13707 N. Davis Road
Lodi, Calif. 95212



City Council
City of Lodi
City Hall
221 W. Pine Street
Lodi, CA. 95241-1910

**RETURN RECEIPT
REQUESTED**

MAY 18 1988

May 13, 1988

Lodi City Council
221 West Pine Street
Lodi, California

Dear Sirs:

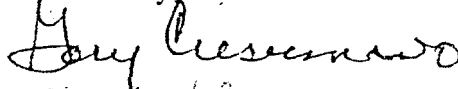
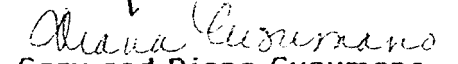
As owners of parcel no. 058-020-12 along Highway 12, we want to go on record as being **adamantly** opposed to **the** construction of a power transmission line across our property. Furthermore, we believe that the **city** council must give serious consideration as to the financial and societal benefits of installing the string of hook-up power lines along the proposed route to Lodi.

The so-called benefits to be gained from the federal power connection do not balance with the negatives, i.e. federal power **is** a less dependable power source, the payments to PG & E won't change, a collection point for starlings **is** created by the miles of overhead lines (devastating losses for those farmers with mature grapes), a devaluation of prime agricultural and potential commercial property, the elimination of the use of airplanes for **spraying**, in general the ugly, nuisance value of lines which detract **from** the value of property and create maintenance problems for crane drivers, well drillers, etc., who service the **homes** and water wells in the vicinity.

Because we are unable to **be** present at **the** hearing, we would like **for** the contents of this letter to become a part of the public record when considering **the** feasibility and advisability of this project.

Please add **our** names to the overwhelming majority of property owners along Highway 12 **who** oppose this project.

Sincerely,



Gary and Diana Cusumano

TELE-FAX MESSAGE

ATTN: Henry Rice
TO: City of Jodi DATE: 5/20/88
TIME: 3:30pm
FAX NO.: 208)333 6795
SUBJECT: Direct Interconnection Project
JOB #: 1163-04 *please deliver immediately!*
FROM: M.A. Nix

POWER Engineers, Inc.
P.O. Box 1066
Hailey, ID 83333

Phone: (208) 788-3456
Fax #: (208) 788-2082

A TOTAL OF 15 PAGES FOLLOW COVER SHEET

SENDING OPERATOR _____

RECEIVING OPERATOR _____

TO VERIFY RECEIPT, CALL (208) 788-3456, ASK FOR FAX OPERATOR

May 25, 1988

CITY OF LODI
DIRECT INTERCONNECTION PROJECT

RESPONSES TO PUBLIC ISSUES

Subsequent to the April 15 release of the Project Draft Environmental Impact Report (DEIR), an administrative hearing was held on Thursday, May 5, in Lodi to solicit public comment. This paper is a compilation of responses to the issues raised at and subsequent to the May 5 hearing. All issues have been discussed in the DEIR and appropriate page references are given. Some additional clarification is offered in the issue responses to demonstrate communications with individuals and organizations.

USE OF CALTRANS RIGHT OF WAY (DEIR: 20 & 34)

Since July of 1987, discussions have been held with CALTRANS' District 10 Right of Way and Permit staff. From these discussions and an examination of Right of Way Record Maps supplied by CALTRANS, the CALTRANS Highway 12/Kettleman Lane right of way is as follows:

- Area from Mile Post 10.16 (Junction of 1-5 and Hwy. 12) to Mile Post 11.2, a point approximately 5,500 feet east of Thornton Road is a zone of restricted access in which no temporary or permanent encroachments are allowed. Therefore the transmission line in that area would have to be placed so as not to extend in any manner into the CALTRANS right of way. This stipulation would require placing the transmission line poles approximately 25 feet north of the northern edge of the CALTRANS right of way.
- Mile Post 11.2 to Lower Sacramento Road. The right of way width is 100 feet. This is composed of a 40 foot paved surface and a 30 foot shoulder on either side. Access is not restricted, which allows for encroachment permits on a case by case basis. Our discussions with the CALTRANS Permit Engineer indicate that they would approve an aerial encroachment to accommodate the pole arms extending over the CALTRANS right of way. Given that approval, the poles could be placed at the edge of the private properties, thereby minimizing the effects of poles located further into the fields. Also,

the CALTRANS Permit Engineer indicated that they would approve an application for a temporary construction access encroachment permit. This would allow construction access from the CALTRANS right of way and alleviate the necessity for removing grape vines to accommodate an unobstructed travel way from one pole location to the next.

EASEMENT VALUATION/USE (DEIR: 20)

Typically, a fifty foot wide right of way on private land would be required to accommodate the transmission line with an additional twenty-five foot overhang easement required from CALTRANS. The total amount of private land required for the preferred route right of way would be approximately twenty-eight acres. The total amount of private land taken out of agricultural production to accommodate structure placement is approximately 0.13 acres. The right of way would be acquired by the City as an easement. Negotiations with landowners for easement rights would be conducted in accordance with the California Uniform Relocation and Property Acquisition Act. Landowners would be compensated for the easement on the basis of a before and after construction fair market appraisal. While many uses are allowed within transmission line easements, certain restrictions are imposed. These would primarily relate to the erection of structures within the easement, or the conduct of activities that might pose a safety hazard or impede the operation and maintenance of the line.

ROUTE & SITE EVALUATION CRITERIA (DEIR: Appendix D & E)

There are many different routing and siting approaches and methodologies. Not all are mathematically valid, many are difficult to understand, and none guarantee that all parties will accept the results of the process.

A weighted summation technique was used for this project. It is a specific technique for calculating a suitability index that is used to rank alternatives. With weighted summation, useful distinctions are first made within each issue and criterion. Each level of distinction or category that is made is assigned a value, typically on a fixed but arbitrary scale (0-1, 1-5, etc.) common to all criteria being considered. A weight is assigned to each criterion to represent its relative importance with regard to other criteria. The weighting score considers and balances the interests of project

proponents, the technical requirements of facility designers, the environmental protection required by law, and the public values of potentially affected communities and citizens.

The DEIR (Appendix D) discusses each of the criteria the routing team developed to evaluate alternative points of interconnection, transmission fine routes and substation sites. These criteria were used for identifying general land use, engineering and environmental conditions that pose constraints to routing a transmission line and siting substations. Weight assignments for these criteria, commensurate with the degree of conflict and/or cost, are also reviewed in Appendix D.

Since there was some concern expressed at the May 5 meeting with respect to the weighting score of 2 used for field effects, it should be noted that by increasing the weighting score to 5, the preferred route would remain the same, since this route has the least number of residential dwellings exposed to electrical and magnetic field effects.

Table 4 in Appendix E of the DEIR shows the relative ranking of the routes.

AGRICULTURAL AIRCRAFT OPERATIONS (DEIR: 11, 14 & 62)

Testimony provided by Bili Bilbo of Resources International in March, 1985, at the California Energy Commission (CEC) hearings on the Geothermal Public Power Line Notice of Intent, Docket No. 84-NOI-1, indicated that aerial side dressing of field ends adjacent to a power fine at right angles to the crop row produces satisfactory coverage with minimal additional costs for material.

PG&E CONTRACT (DEIR: 31-32 & Appendix B)

At the May 5 public hearing on the project, Pacific Gas and Electric (PG&E) indicated that the project would have no impact on transmission rates charged to Lodi through the Northern California Power Agency (NCPA). PG&E based its statement on an interpretation of the agreement for transmission services between NCPA and PG&E.

The NCPA/PG&E agreement calls for PG&E to provide transmission service to NCPA in a variety of forms. PG&E transmission service has four functions.:

- Generation-Tie: Service from power plants to the main grid.
- Backbone: Service across the main grid.
- Area: Service from the main grid to the customer meter.
- Interconnect: Service from entities outside PG&E's service area boundaries.

The City of Lodi currently pays for some generation-tie, backbone and area transmission service. By connecting the City's system to the Western Area Power Administration (WESTERN), which is tied directly to PG&E's main grid, the PG&E area service is no longer used. Instead, the City would pay WESTERN a fee to transmit power from the PG&E backbone to the City. With the Project, the City of Lodi can reduce its transmission charges since WESTERN wheeling rates are considerably less than PG&E area service rates.

The NCPA/PG&E agreement was developed with the transmission service functions described above, with the vision of projects similar to the Lodi/WESTERN Direct interconnection Project. Other NCPA projects have been developed when they can reduce or eliminate transmission services costs. PG&E has acknowledged the benefit of other similar NCPA projects; for example, the Co-tenancy Agreement and NCPA Hydro to Bellota Transmission Line. PG&E has also acknowledged savings which would be gained by the City of Lodi (Lodi News-Sentinel, Thursday, May 5, 1988).

PROJECT ALTERNATIVES (DEIR references shown for each alternative)

- No Action (DEIR: 2 & 25-26)

No action would result in City transmission supply capacity limitation in the near future; preclude the City from providing the project's benefits to the City's rate payers; and inhibit the City's ability to meet its long term electric transmission supply and reliability goals. It is not considered a viable alternative action for meeting the stated need.

- Switching Station Alternatives (DEIR: 7, 13 & Appendix D and E)

Two alternative points of WESTERN interconnection were identified as follows:

- IC-1--is located just east of Thornton Road on the south side of Turner Road.
- IC-2--is approximately three-quarters of a mile south of Turner Road, east of Thornton Road. IC-2 is the preferred location due to the favorable location of the *existing* 230kV line structures and shorter 230kV lines to Lodi.

- Routing Alternatives (DEIR 9 & 36-37)

Preliminary screening of potential alternative routes **was** conducted to determine areas of substantial conflict based upon environmental reasons, obvious potential **or** stated public and agency opposition, and inability to conform substantially with the primary routing criteria. Five routing alternatives were identified from the preliminary screening process. The **routes, shown on** the project area map (DEIR: **Appendix H**) are: Turner Road Alternative, Sargent Road Alternative; Kettleman Lane Alternative, the Cross-Country Alternative, and Harney Lane Alternative. In addition to the major **altetnative** routes, several **cross** link routes **were** examined that would **serve** as alternative north-south running segments to connect the east-west **running** segments.

Alternative cross links examined in detail were as **follows**: Western Pacific Railroad alignment; Davis **Road**; and tower Sacramento Road. **Additional** cross link routings **were** initially examined, and ultimately rejected **based upon** their inability to offer truly alternative solutions differing from the **more** accessible cross link alignments as aforementioned.

- **Substation Alternatives** (DEIR 7, 14, 30 & Appendix D and E)

Three alternative **substation** sites were considered: SS-1, a site near the southwest corner of Kettfeman Lane and tower **Sacramento Road**, SS-2 on the **southeast** corner of this intersection; and SS-3, a site adjacent to the west **side of** the Henning Substation. **All three** sites are presently **Outside** the Lodi **City Limits** and are zoned **EA-40** (an older zoning designation) or **GA-40**. The proposed **substation** represents a permitted use within this zoning designation as described in the Planning Code of San Joaquin County.

- **Joint Use with PG&E** (DEIR: 28, 42 & Appendix C and D)

A distribution line, owned by PG&E, **exists** on the north **side** of Kettleman Lane **from** a point near **Ray Road** to Lower Sacramento **Road**. Construction of the proposed 230kV along this **side** (north **side**) of Kettleman Lane is not preferred **for** the following reasons:

- **Increased Construction Cost**--The amount of the increase would depend upon PG&E and **City** requirements.
- **Maintenance Costs**--A distribution underbuild on a transmission line increases maintenance **costs**. These increased maintenance costs relate to the increased time required to **deaf** with the energized distribution underbuild.
- **Reliability**--The reliability of the **transmission** is **reduced** by the **distribution** underbuild due to the increased exposure to transmission **tine outages related to distribution** outages.

- **PG&E Upgrade** (DEIR: 3 & 26)

PG&E estimates a 60kV transmission upgrade **will be** required in 1989 or 1990 and will cost approximately \$1,000,000. The **Lockeford** Substation transformer capacity **increase** is estimated to be **required in the late 1990's** and will cost approximately \$3,000,000. **These costs were assumed to accrue to the City for purposes of the project analysis.** While the proposed facilities

for the Direct Interconnection Project **will** cost about **\$9.6 million**, the difference in cost will be more than **made up** for by transmission service savings.

● **Alternative System** (DEIR: 30 & 71-72)

An **alternative** was considered that would place the 230kV - 60kV substation required **for** the proposed project at the interconnection point to WESTERN's 230kV line. Disadvantages **of** this alternative include:

- **Right of Way & Environmental Considerations**--Three circuits would be required from the substation to the City of Lodi; as a minimum one double **and** one single circuit line **would be** required along two separate routes. One of the 60kV circuits **would** likely be constructed along the route **of** the **proposed** 230kV line, resulting in **similar** right of way requirements and environmental impacts. An additional 60kV line would be required on one of the alternative routes requiring additional right of way and increasing environmental impacts.
- **Losses**--The 60kV lines would have higher **losses** than the 230kV line, approximately ten times **greater**.
- 8 **Voltage Regulation**--is **questionable** on the 60kV lines.

CLEARANCE OF LINES ABOVE GROUND (DEIR: 20)

California General Order 95 **requires** 230kV lines to have a minimum clearance above ground **of** thirty feet (30'). Actual clearances above **ground** will be determined **during the detailed design** phase **and** will take into consideration **terrain**, existing **facilities**, **and** expected activities **along** the route. If additional **clearance** is **required**, structure heights would be increased **and/or** span lengths decreased to effect an increased clearance. The City expects to **work with** the **landowners** to determine the appropriate design.

GRAPE VINES SUPPORTED ON WIRES (DEIR: 53 & Appendix A)

Long wires, such as fence wire or wires supporting grapevines, that are strung on wooden posts present the possibility for induced current and voltage, if they run more or less parallel to and close to high-voltage lines for long distances. The level of these induced currents and voltages is related to the continuous length of the wires, electric and magnetic field strengths, the insulation level of the posts and the incidence of natural grounds (grounding due to growing vegetation and wire ends that contact the ground).

There is no known incidence of injury due to induction on fences or grape vine support wires. If annoying potentials or currents occur, they can be mitigated by breaking the electrical continuity of the wires and/or by grounding the wires at periodic distances.

UNDERGROUND CONSTRUCTION - ADVANTAGES AND DISADVANTAGES

◆ **Advantages** (DEIR: 4-5)

The principal advantages of undergrounding a transmission line are reduction of adverse visual and esthetic impacts, and minimization of weather related affects on the line.

◆ **Disadvantages** (DEIR: 4-5)

The major disadvantages of undergrounding a transmission line include:

- Cost--Four to ten times overhead line costs; would increase total project costs by approximately two to three times.
- Right of Way Impacts--During construction, a continuous trench is required for underground cable versus one or more holes at pole locations (500-1,000 foot intervals) for overhead lines.
- Right of Way Access--Access to the right of way is required throughout its length for underground cable; pole access only, for the most part, is required for overhead lines.

- Vulnerability--Underground transmission is vulnerable to **leaks**, dig-ins, washouts, **seismic** events and cooling-system failures.
- Outage Duration--Typical outage durations for underground transmission are days or **weeks** versus hours for overhead lines.
- Maintenance--Underground transmission requires specialized skills and equipment.
- Reliability--Underground transmission is less reliable than overhead transmission.

SUBSTATION NOISE (DEIR: 52 & Appendix A)

The noise level for **the** transformers to be included in the proposed substation would be approximately 45 dBA when measured at 200 feet from the transformers. The San Joaquin Council of Governments allows a noise level of 65 dBA at the property line in residential developments.

ELECTRIC AND MAGNETIC FIELD EFFECTS

● **Electric field Effects** (DEIR: 56-57)

Figure 1 shows calculated electric fields for the proposed project. Curves for **similar** and different phasing are included. Different phasing was selected **for the project** as it reduces electric field levels. Figure 1 also summarizes existing **electric** field regulations and guidelines. These regulations and **guidelines** stipulate field levels at the edge of right of way (Montana, New York and New Jersey) or within the right of way (North Dakota, Oregon, Minnesota, and the City of Austin).

The **proposed** transmission project meets **all** current electric field regulations and guidelines.

● **Magnetic Field Effects** (DEIR: 56-57)

Figure 2 shows calculated magnetic fields for the proposed transmission project **for several operating** conditions as **follows**:

- **The shaded area is for** existing loading conditions.

- I The Crosshatched area is for anticipated maximum loading conditions.
- The upper curve reflects maximum emergency operating conditions with one line out of service.

The magnetic field levels shown in the DEIR are for the rated ampacity of the line conductors.

Table 1 summarizes levels of ambient magnetic fields in homes and magnetic fields near common electrical appliances.

"... Based on the low levels of magnetic fields from the proposed line and the comparable levels to typical exposure within homes, it is highly unlikely that the levels of magnetic fields from the proposed line would have any adverse affect on biological systems." (DEIR: 57)

- **Research (DEIR: 54-55)**

A five million dollar research project that was initiated in 1980 was recently completed in New York. The goal of the project was to determine whether there are health hazards associated with electric and magnetic fields produced by power lines, especially 765kV lines. The operating voltage for the proposed line is much lower, 230kV.

The project conducted research in seven general subject areas. The results in one of these areas, epidemiology of cancer incidence in children, has produced a great deal of controversy. An article relative to the Savitz study was paraphrased by Mr. Ruhl at the May 5, 1988 hearing. He indicated that power line magnetic fields were responsible for 15% of all childhood cancers. The actual article states "In the childhood cancer study, researchers reported that children in Denver living near power lines were almost twice as likely to develop leukemia as those raised further from the lines. If these associations are correct and apply around the country, and if a causal relationship can be established, these ambiguous magnetic fields may be responsible for up to 15% of all cases of childhood cancer, the report says." Highlighting added for emphasis.

Dr. Savitz has pointed out several times during the **past** year that **the results** of **his** study are "suggestive," but *for* a number of reasons they are not completely convincing. Additionally, Dr. Carpenter, Executive Secretary, New York study has stated, "Savitt' **study** by no means proves a cause-and-effect relationship between electromagnetic **fields** and cancer. Nor **does it give us any information** on how magnetic fields may generate cancer." Howard Wachte', a co-worker with Dr. Savitz is quoted as saying, "The wire codes do **seem** to correlate with cancer, at least in the Denver area. Our study and the **Wertheimer** and **Leeper** work have established that, but whether the cancer is caused by magnetic **fields** or something **else** remains an **open** question."

- **Summary**

The results of recent research with regard to the effects of electric and magnetic fields on biological systems are inconclusive; more research **is needed**.

Calculated electric **field** levels for the **proposed 230kV** line either meet or **are well below levels** adopted by **various entities**. Magnetic field levels for **the proposed** project are comparable to exposure levels **within** homes.

The electric **and** magnetic field effects factor **is** only **one** of a number of factors to be considered when selecting the most environmentally acceptable **route for** a transmission line. (See DEIR Appendices D and E.)

TABLE 1

**HOME MAGNETIC FIELD LEVELS
 AMBIENT & NEAR ELECTRIC APPLIANCES ***

APPLIANCE	MAGNETIC FIELD LEVELS - MILLIGAUSS	
	TYPICAL RANGE	MAXIMUM LEVEL
Ambient	0.1 to 1.15	28 to 62
Range	1 to 80	175 to 625
Ceiling Fan	1 to 11	125
Refrigerator	1 to 8	12 to 187
Microwave	3 to 40	65 to 812
Toaster	2 to 6	9
Coffee Maker	1 to 2	4 to 25
Clothes Dryer	1 to 24	45 to 93
Dishwasher	1 to 15	28 to 712
Elec. Blanket	3 to 50	65
Shaver	50 to 300	500 to 6,875
Blow Dryer	1 to 75	112 to 2,125

FIGURE 1

ELECTRIC FIELD LEVELS

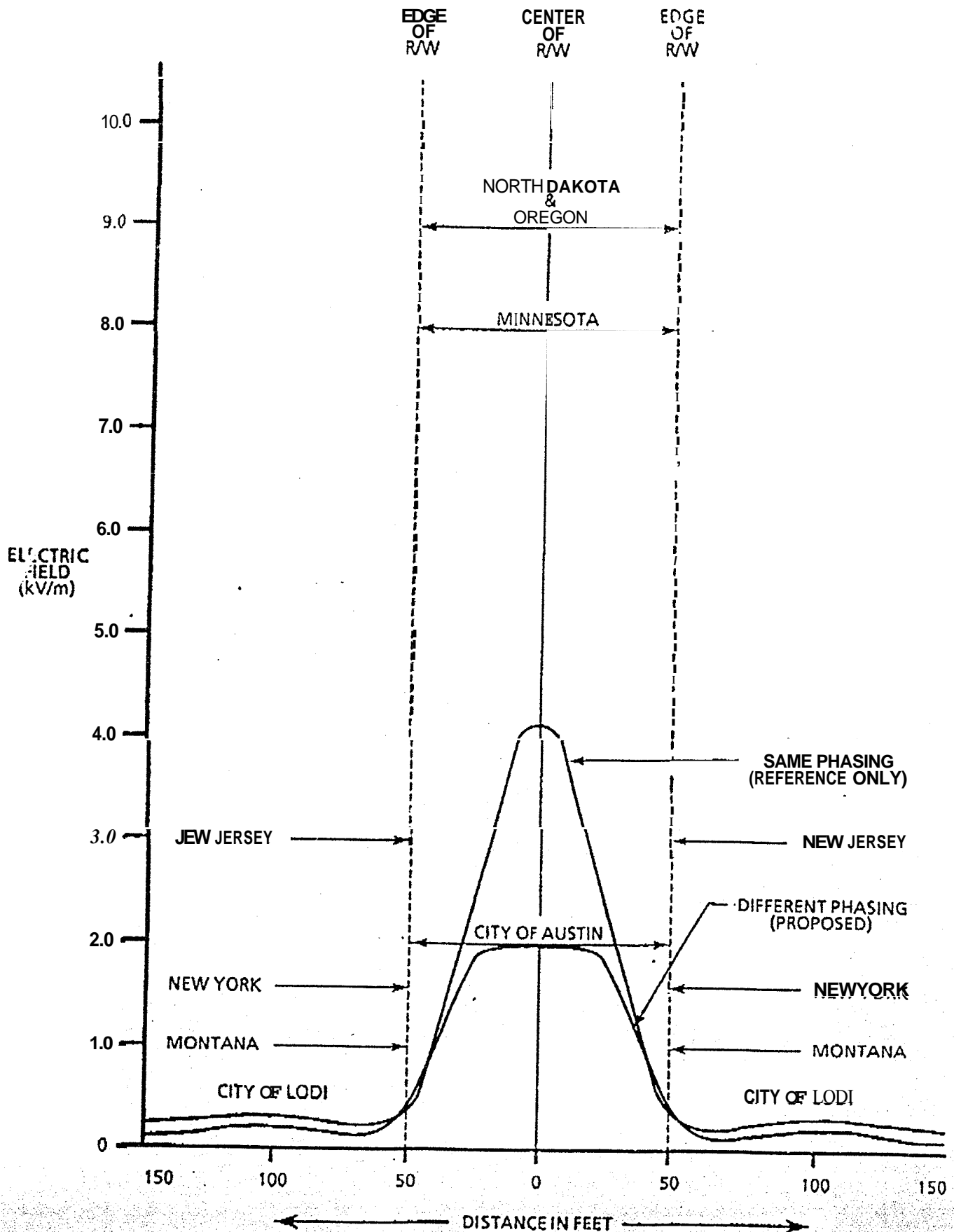
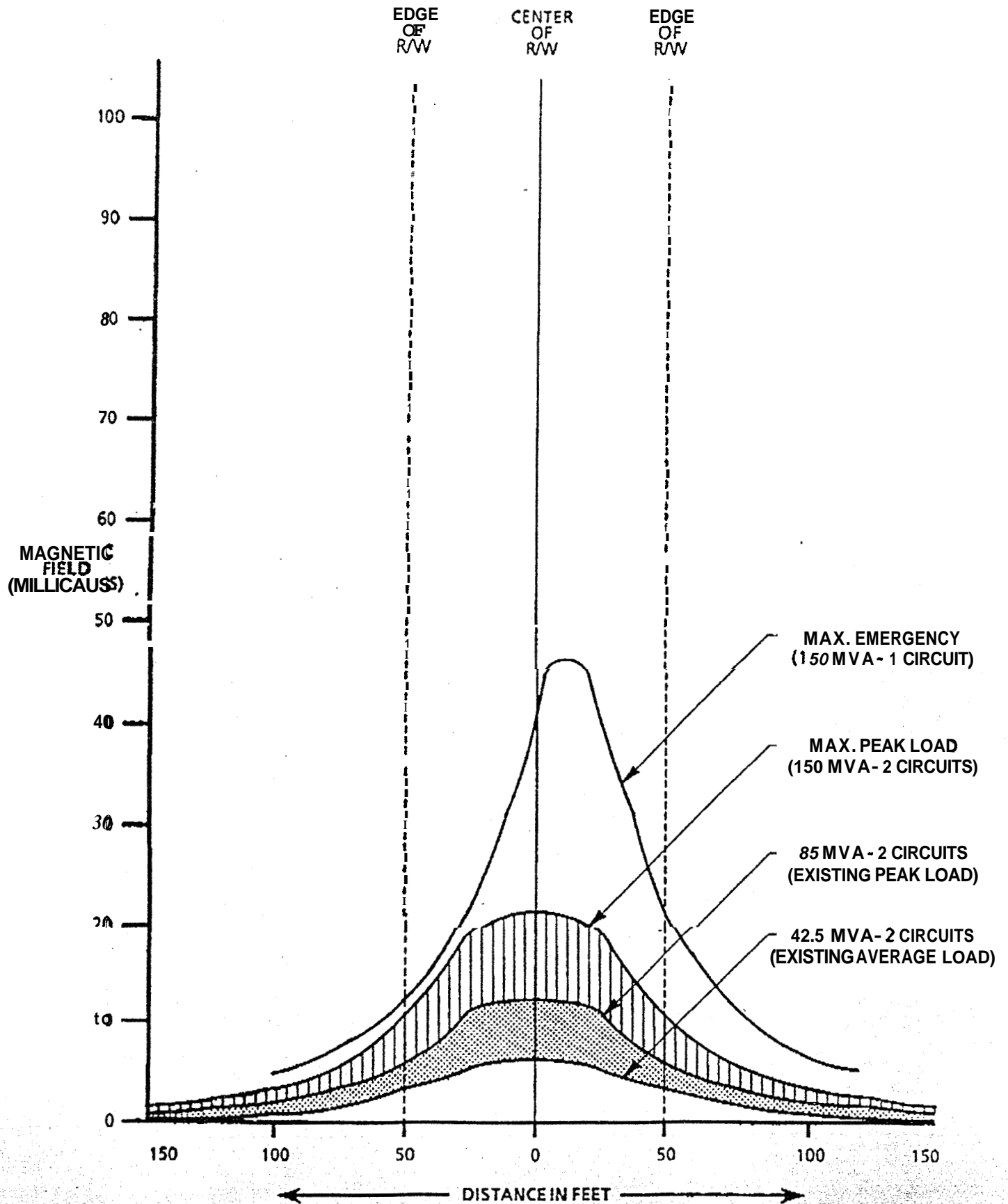


FIGURE 2

MAGNETIC FIELD LEVELS



POWER ENGINEERS, INC.

POWER Engineers, Inc.
P.O. Box 1066
1020 Airport way
Hatley, Idaho 83333
(208) 768-3456
Fax # (208) 788-2082

RECEIVED

JAN 18 1988

Utility Dept.

LETTER OF TRANSMITTAL

7/73/88

City of Lodi
221 West Pine Street
Lodi, CA 95241-1910

Attention: Henry Rice

Re: City of Lodi Direct Interconnection Project

Enclosed are the Following:		DESCRIPTION
DATE	COPIES	
1/13/88	1	Original list of persons requesting a copy of the DEIR, per January 6, 1988, public meeting.
These are Transmitted:		
<input type="checkbox"/> For your information <input type="checkbox"/> For action specified below <input type="checkbox"/> For review and comment <input type="checkbox"/> For your use <input type="checkbox"/> As requested		

Remarks:

Submitted By
POWER Engineers, Inc.



Frank L. Rowland

cc: File

TO RECEIVE A COPY OF THE DRAFT ENVIRONMENTAL IMPACT REVIEW/ENVIRONMENTAL ASSESSMENT
OF THE PROPOSED 230-KV ELECTRIC INTERCONNECTION BETWEEN THE CITY OF LODI AND THE
WESTERN AREA POWER ADMINISTRATION (WESTERN)

NAME

ADDRESS

Michael Harris	200 S. Chas. St. Lodi, CA 95240
Edith Harris	2132 Hartweg St. Lodi 95240
Wilber Ruhl	3933 Elwood St Lodi 95242
R. M. Ripken	14300 N. DeVries Rd Lodi 95242
Walt Battin	3434 W. Hwy 12, Lodi, CA 95242
Frank Harris	2172 Hwy 12, Lodi, CA 95242
KEN MIKADA	7280 E. KETTLEMAN RD Lodi, CA 95240
John J. Hayao	P.O. Box 857 Lodi, CA 95241-0857
Paul Butcher	14305 Hartweg Lodi 95240
Virginia Gray	2534 McFarland St. Lodi 95242
James Kierulff	865 E. Olive Ave Lodi 95242
K. M. Mills	2951 W. Sargent Rd. Lodi 95242
R. E. + J. V. Mills	209 S. Fairmont Ave Lodi 95240
RAY COLDANI	521 E. Name Lodi -
Richard Ripken	14300 N. DeVries Road Lodi 95242
Jack + Ethel Kiel	1081 E. Hwy 12 Lodi CA 95242
Mr + Mrs John Bezuy	1701 E. Hwy 12 Lodi ca 95242
FRED BATHEN	1522 MARIPOSE WY Lodi 95242
Ally Hilly Jr	15175 N. DeVries Rd Lodi 95242
Lo Carter Jr	27200 N. Shanton Rd. Lodi 95242
Lamar Hedrick	209 E. Hwy. 12 Lodi 95242
Tom Tsutakawa	1671 E Hwy 12 Lodi 95242
M. C. CRUM	2660 ALDER GLEN DR Lodi 95242
R. O. BADER	4170 W. Hwy 12 Lodi 95242
Mr & Mrs THOMAS RECHMUTH	1338 MIDVALE RD Lodi 95240

SIGN IN SHEET FOR ADDRESSING COUNCIL

NAME _____

ADDRESS

Paul Dunn	1232 BRANDYwine Dr.
Dev. Tevelson	1607 Lakeland Dr.
Ed. K. Liangim	1217 Chaparral Wy Stockton
IOA Thresher	327 Donner Lodi
Joe Cotta Jr	20200 W. Thornton Rd
Richard Ruppel	14300 N. Del Norte Rd Lodi
Tom B. Co	1522 MARAPOST WAY Lodi
Mike (41) FORT	3469 W. Glen HOLT STKN
JT HOLT	2549 ORCHARD
Sherry Johnson	712 Calaveras Lodi
Shelene M. Stapleton	400 Pioneer Dr. Lodi

TO RECEIVE A COPY OF THE DRAFT ENVIRONMENTAL IMPACT REVIEW/ENVIRONMENTAL ASSESSMENT
OF THE PROPOSED 230-KV ELECTRIC INTERCONNECTION BETWEEN THE CITY OF LODI AND THE
WESTERN AREA POWER ADMINISTRATION (WESTERN)

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